

## PFC-600-13.8

### Power Block Modules

### Owners Guide

*(These instructions are intended for use by a technician familiar with electronic products)*

- Universal AC input / Full range
- Built-in active PFC function, PF > 0.94
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- Current sharing up to 2400W(3+1)
- With power good and fail signal output
- Built-in remote ON-OFF control
- Built-in remote sense function
- Approvals: UL/CUL/ TUV/CB/ CE
- 3 year warranty



### DESCRIPTION

The PFC-600-13.8 is a Power Block Module with built-in active PFC function, PF > 0.94. All PFC series come with four layers of protection against Short circuits, overload, over voltage, and over temperature protection. To help defend against overheating, all PFC series also come with forced air-cooling by a built-in DC fan.

### SPECIFICATIONS

AC input voltage range .....	85 ~ 264 VAC or 120 ~ 370 VDC
AC input current .....	3.5 Amps @230 VAC ~ 7 Amps@115 VAC
Output Voltage .....	13.8V
Output Current .....	0~45A
DC output current adjustment range .....	-20 ~+5% of rated output voltage
Tolerance .....	+/- 1%
Over load protection .....	85% ~ 115% constant current limiting, auto-recovery
R&N .....	120mV
Efficiency .....	88%
Over voltage protection .....	109% ~ 127% of rated output voltage
Setup, rise, hold up time .....	1000 ms, 50ms, 15ms, at full load and 230 VAC
Withstand voltage .....	I/P-O/P: 3kVAC, I/P-FG: 2kVAC, 1 minute
Working temperature .....	0~50C@100%, -40C and 70C@80% load
Safety standards .....	UL 1950, TUV EN60950 approval
EMC standards .....	EN55922 class B, EN61000-3-2,3, EN61000-4-2,3,4,5,6,8,11, ENV50204
Dimensions .....	2.5 H x 5 W x 13 D inches, nominal
Weight .....	4.5 lbs, nominal

## **INSTALLATION WARNING**

The individual user should take care to determine, prior to use or installation, whether this device is suitable, adequate and safe for the use intended. Since individual applications are subject to great variation, DuraComm makes no representation or warranty as to the merchantability, suitability or fitness of these units for any specific application.

The power supply operates internally from voltages in excess of 300 volts. In rare cases, voltage spikes or transients on the AC power line, or overheating, may cause a component failure in the charger. Overloading the output will cause the over current feature to operate. In either case, the cause must be determined and corrected. Failures require investigation as to cause and/or repair of the unit.

**THERE ARE NO USER SERVICEABLE PARTS INSIDE. HAZARDOUS VOLTAGES EXIST INSIDE THE UNIT. SERVICE AND REPAIR MUST BE REFERRED TO QUALIFIED FACTORY PERSONNEL.**

**DO NOT** block any of the cooling vents on the sides and always allow adequate ventilation by not installing the unit inside tightly closed spaces. Physical mounting position is not critical but the cooling vents and the cooling fan must not be blocked. Make certain the input voltage switch is set to the correct voltage BEFORE applying AC power.

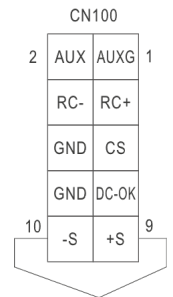
## **MECHANICAL SPECIFICATION**

Connector Pin No. Assignment(CN100) : HRS DF11-10DP-2DS or equivalent

Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	AUXG	6,8	GND	HRS DF11-10DS or equivalent	HRS DF11-**SC or equivalent
2	AUX	7	DC-OK		
3	RC+	9	+S		
4	RC-	10	-S		
5	CS				

## **FUNCTION DESCRIPTION of CN100**

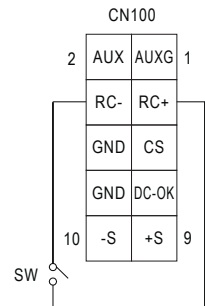
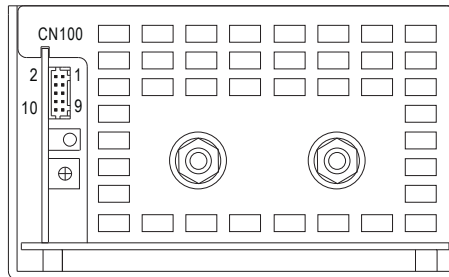
Pin No.	Function	Description
1	AUXG	Auxiliary voltage output ground. The signal return is isolated from the output terminals (+V & -V).
2	AUX	Auxiliary voltage output, 4.75~5.25V, referenced to pin 1(AUXG). The maximum load current is 0.3A. This output is not controlled by the "remote ON/OFF control".
3	RC+	Turns the output on and off by electrical or dry contact between pin 4 (RC-), Short: Power OFF, Open: Power ON.
4	RC-	Remote control ground.
5	CS	Current sharing signal. When units are connected in parallel, the CS pins of the units should be connected to allow current balance between units.
6,8	GND	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
7	DC-OK	DC-OK signal is a TTL level signal, referenced to pin8(DC-OK GND). High when PSU turns on.
9	+S	Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.
10	-S	Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V.



### **Remote Control**

The PSU can be turned ON/OFF by using the "Remote Control" function.

Between RC+(pin3) and RC-(pin4)	Output Status
SW ON (Short)	OFF
SW OFF (Open)	ON



## **CONDUCTOR PRETREATMENT**

All kinds of copper conductors can be clamped without treatment. DO NOT solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

## **RECOMMENDED COPPER WIRE SIZE FOR CURRENT CAPACITY**

(Insulated Wire, Single Conductor in free air)

<b><u>Current Level in Amperes</u></b>	<b><u>Wire Size</u></b>
<7 AMPERES	20 AWG Up to 5 feet 18 AWG Up to 10 feet
14 AMPERES	18 AWG Up to 5 feet 16 AWG Up to 10 feet
20 AMPERES	16 AWG Up to 5 feet 14 AWG Up to 10 feet
30 AMPERES	14 AWG Up to 5 feet 12 AWG Up to 10 feet
40 AMPERES	12 AWG Up to 5 feet 10 AWG Up to 10 feet
50 AMPERES	10 AWG Up to 5 feet 8 AWG Up to 10 feet
70 AMPERES	8 AWG Up to 5 feet 6 AWG Up to 10 feet
100 AMPERES	6 AWG Up to 5 feet 4 AWG Up to 10 feet

## **LIMITED WARRANTY**

*DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship, when in normal use and service for a period of three year from the date of purchase, from an authorized DuraComm dealer.*

*Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty, will be warranted for the remainder of the original warranty period, only, and will not extend into a new three year warranty period.*

*The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with manufacture, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.*

*DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.*

*DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.*

*The implied warranties which the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.*

*Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.*

*This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.*

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